

## Abstract

A method for measuring viscosity and shear rate at which the measurement is performed is provided, by utilizing an acoustic wave sensor, and calculating the shear rate as a function of the characteristic rate of quartz movement in response to a given power transmitted to a fluid, and the viscosity of the fluid. Related aspects of the invention provide for methods for controlling the shear rate at which a viscosity measurement is performed, and characterizing viscoelastic fluids at a plurality of shear rates.